

Engineering Standard

SAES-O-113

12 October, 2005

Security Lighting System

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Saudi Aramco DeskTop Standards

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1 General

This standard refers to Security Lighting for Saudi Aramco's vital industrial facilities per [SAES-O-100](#), paragraph 1.3. This Standard shall be used in conjunction with Safety and Security Directive No. 13 (SSD/13) of the Saudi Arabian Government Supreme Commission for Industrial Security.

2 Amendments

Safety and Security Directive No. 13 has been rewritten by the Supreme Commission for Industrial Security.

3 Commentary

Certain clarifications have resulted from applying this standard to Saudi Aramco projects. The following items reflect a general understanding reached with representatives of the Supreme Commission for Industrial Security and should be verified through liaison by the Proponent with the General Manager of Industrial Security Operations and the Manager of the Consulting Services Department in case there are conflicts with other company engineering standards and materials specifications, standard drawings or Industry Codes.

- 3.1 Security lighting shall be installed per [SAES-P-123](#), "Lighting" as amended by SSD/13, "Security Lighting" for all perimeter security fencing (SSD/1 or SSD/2).
- 3.2 Security lighting shall have an underground electrical distribution system per [SAES-P-104](#), "Wiring Methods and Material" as amended by SSD/13, "Security Lighting" and SSD/11, "Power Supplies".
- 3.3 Electrical power supply for SSD/13 security perimeter and area lighting shall be in accordance with the requirements of [SAES-P-100](#).
- 3.4 All externally visible lights in plants shall be capable of being extinguished within 15 minutes.
- 3.5 Table 1 indicates security lighting requirements for common Saudi Aramco Vital Facilities. (See Note 1.)
- 3.6 Reference Standards (Latest Edition)

Saudi Aramco Engineering Standards

[SAES-O-100](#)

Safety and Security, General Requirements

[SAES-O-109](#)

Buildings Housing Sensitive or Vital Equipment

<u>SAES-O-111</u>	<i>Power Supplies</i>
<u>SAES-O-114</u>	<i>Check Point Lighting</i>
<u>SAES-P-100</u>	<i>Basic Power System Design Criteria</i>
<u>SAES-P-103</u>	<i>Batteries and UPS Systems</i>
<u>SAES-P-104</u>	<i>Wiring Methods and Materials</i>
<u>SAES-P-107</u>	<i>Overhead Distribution Systems</i>
<u>SAES-P-111</u>	<i>Grounding</i>
<u>SAES-P-113</u>	<i>Motors and Generators</i>
<u>SAES-P-114</u>	<i>Power Systems and Equipment Protection</i>
<u>SAES-P-116</u>	<i>Switchgear and Control Equipment</i>
<u>SAES-P-119</u>	<i>Substations</i>
<u>SAES-P-121</u>	<i>Transformers, Reactors, Voltage Regulators</i>
<u>SAES-P-123</u>	<i>Lighting</i>

Safety and Security Directives

<i>SSD/1</i>	<i>Standard Security Fence</i>
<i>SSD/2</i>	<i>Category II Fencing</i>
<i>SSD/11</i>	<i>Power Supplies</i>
<i>SSD/13</i>	<i>Security Lighting Systems</i>
<i>SSD/14</i>	<i>Check Point Lighting</i>

Revision Summary

12 October, 2005

Revised the "Next Planned Update". Reaffirmed the contents of the document, and reissued with no other changes.

Table 1 – Security Lighting Requirements for Common Saudi Aramco Facilities

Facility	Perimeter Lighting	Area Lighting	Check Point Lighting	Comments
Launcher/ Receiver Station for Hydrocarbon Pipelines	Not Required	SSD/113 Required	Not Required	Remote sites with no available power source require no lighting.
Water Injection Plant	Required SAES-P-123	SSD/13 Required	Required SSD/14	SAES-P-123 , Perimeter Lighting must be the same intensity as SSD/13.
Metering Station for Hydrocarbon Pipelines	Not Required	SSD/13 Required	Not Required	Remote sites with no available power source require no lighting.
GOSP's	Required SSD/13	SSD/13 Required	Required SSD/14	
Data Acquisition Stations	Not Required	SSD/13 Required	Not Required	Remote sites with no available power source require no lighting.
Communication Facilities	Required SSD/13	SSD/13 Required	Required SSD/14	Remote sites with no available power source require no lighting.
Gas Plants	Required SSD/13	SSD/13 Required	Required SSD/14	
Harbor Facilities	Required SSD/13	SSD/13 Required	Required SSD/14	
Offshore Installations (e.g., Sea Islands GOPSs)	Required per letter F/1400/609	Required per letter F/1400/609	Not Required	
Communication Towers	Not Required	SSD/13 Required	Not Required	Remote towers with no available power source require no lighting.

Note: (1) Vital facilities which require security lighting are not limited to those indicated in the above Table.